

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

HONEYWELL INTERNATIONAL INC.  
and HONEYWELL INTELLECTUAL  
PROPERTIES INC.,

Plaintiffs,

v.

HAMILTON SUNDSTRAND CORPORATION,

Defendant.

C.A. No. 99-309-GMS

**HONEYWELL'S REPLY TRIAL BRIEF**

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## INTRODUCTION

Sundstrand's Trial Brief confirms that Honeywell will rebut the *Festo* presumption under each of the three criteria set forth by the Supreme Court. Sundstrand's position depends on systematically mischaracterizing the prosecution record, the procedural history of this case, and Honeywell's remand arguments. Most notably, Sundstrand's stance depends on a complete disavowal of its own proof at the 2001 jury trial. Sundstrand's need to turn its back on the actual facts underscores the weakness of its arguments.

Guided by the prosecution history, the case law, and this Court's previous factual finding that "Honeywell did not give up an embodiment of the invention with the inlet guide vane" (Ex. 1 at \*6), the Court must determine whether Honeywell, in amending the patents, "surrender[ed] the particular equivalent in question," *Festo*, 535 U.S. at 740, or whether Honeywell has successfully rebutted the presumption. For the reasons stated in Honeywell's Trial Brief and herein, the Court should hold as a matter of law that Honeywell has successfully rebutted the *Festo* presumption and that the jury's February 2001 verdict of infringement must be reinstated.

### **I. The Equivalent Addressed by Honeywell on Remand is the Same Equivalent Addressed By the Parties, the Court, and the Jury at the February 2001 Trial.**

Sundstrand bases much of its remand argument on the spurious claim that Honeywell "has invented a new definition of the equivalent to the IGV limitations" and that Honeywell on remand "focuses on detailed aspects of the APS 3200 surge control system that Honeywell never presented to the jury." Sundstrand's Trial Brief ("Sundstrand Br.") at 14; *see also id.* at 1, 2-3, 9-11, 16, 19. Perhaps because Sundstrand's new counsel was not involved in that trial, its descriptions of the trial record, like its assertions about Honeywell's arguments on remand, are plain wrong.

In the first place, Sundstrand's argument ignores the reality of what was and is at issue. The "equivalent" at issue in a *Festo* remand is the *specific apparatus and method* that the jury found infringing at trial. As this Court knows, infringement cases are not decided in the abstract, but rather in connection with a *specific accused apparatus and method*. In this case, the specific apparatus and method accused of infringement was the APS 3200 surge control system using a particular, "unique" DELPQP flow-related parameter and a particular use of inlet guide vane position, and the jury rendered its decision solely with respect to that specific structure and method. Argument by Sundstrand's new counsel that what was at issue was any surge control system that "incorporate[d] the position of the inlet guide vanes into the surge control system" (Sundstrand Br. at 1) is nonsensical. The *Festo* "equivalent" is not some abstract description or concept such as Sundstrand now supposes on remand, but rather is the *specific apparatus and method* that was accused of and found to be an infringement.

And the record confirms this. In describing the equivalent surge control system in its opening remand Trial Brief, Honeywell relied *exclusively* on testimony and evidence from the February 2001 trial. Honeywell Trial Brief ("Honeywell Br.") at *passim*. While the *specific apparatus and method* found to have infringed (to wit, the "Sundstrand equivalent") is the subject of the inquiry under *Festo* -- which asks, for example, whether the narrowing amendment had more than a tangential relation *to the equivalent* (535 U.S. at 740) -- what comprises that equivalent cannot be revisited now.

Honeywell's discussion of the Sundstrand equivalent in its Trial Brief matches precisely the evidence presented to the jury by *both sides* at the trial. Both parties' trial experts, Mr. Muller and Mr. Shinskey, as well as both trial counsel in their closing arguments to the jury, addressed extensively the *specific apparatus and method* accused of infringement: Sundstrand's use of the "unique" DELPQP flow-related parameter that gave rise to the APS 3200's particular

use of inlet guide vane position -- not some generic, abstract notion of a surge control system that “incorporate[d] the position of the inlet guide vanes into the surge control system.”

For example, Mr. Shinskey, Sundstrand’s technical expert, testified that “it is by measuring the position of inlet guide vanes that the APS 3200 surge control system insures that it does not go into low-flow mode when it actually should be in high-flow mode.” Ex. 3 at 1580. Shinskey further testified that the “only purpose” of the inlet guide vane position in the APS 3200 surge control system “is to protect against this possibility and it’s caused based on the unique characteristic of the DELPQP measurement as a function of flow.” *Id.* at 1383; *see also Id.* at 668-69 (Muller discussing same aspects of 3200 in his testimony). Honeywell relied heavily on this testimony from Shinskey when arguing infringement under the doctrine of equivalents to the jury during closing argument. *Id.* at 2550-51.

Similarly, Sundstrand’s counsel argued during his closing to the jury that “you will recall from the testimony that this particular parameter, DELPQP which has particular characteristics, follows a curve where it doesn’t correlate perfectly with air flow in the compressor. ... Therefore ... a separate test is built in [to the 3200 surge control system] that involves IGV position, ... this test determines which side of that curve you’re on. Is it in high flow or low flow?” Ex. 26 (Additional Excerpts from February 2001 Trial Transcript) at 2599-2601. Sundstrand’s counsel continued: “The only role of IGV position in this entire system is a back up test to determine whether because of the funny characteristic of this particular way to measure the air movement, the machine is in high or low-flow mode.” *Id.* at 2602. Of course, after considering both sides’ evidence and argument on this point, the jury held that the APS 3200 surge control system was an infringing equivalent.

In reality, it is Sundstrand’s caricature of Honeywell’s equivalents theory that is flatly inconsistent with the trial record. If Honeywell’s argument had really been as broad as Sundstrand’s new counsel supposes in its remand trial brief -- covering any surge control system

that “incorporate[d] the position of the inlet guide vanes into the surge control system” (Sundstrand Br. at 1) -- the patents would have been found invalid, contrary to the findings of the jury, this Court, and the Federal Circuit. As Sundstrand points out and as it argued at trial, there are examples of inlet guide vane position use, standing alone, in the prior art. But that generic, abstract concept was not the subject of trial. Rather, what the parties presented and what the jury found to infringe at trial was the APS 3200 surge control system’s *particular* use of inlet guide vanes as a response to that system’s *particular* DELPQP flow-related parameter. It is that system, determined by the jury to be an infringing equivalent, that is the focus of this remand proceeding.

## **II. The Reason for The Amendments Bears No More Than a Tangential Relation To the Sundstrand Equivalent.**

The “tangential relationship” prong asks whether the reason for the narrowing amendment bore more than a tangential relation to the particular equivalent at issue. *Festo*, 535 U.S. at 740. In its Trial Brief, Honeywell demonstrated that the objectively apparent reason for Honeywell’s amendments was to include additional limitations in order to overcome prior art that had nothing to do with inlet guide vanes but rather disclosed a surge control system with P and  $\Delta P$  sensors and proportional and integral control. Hon. Br. at 16-17. When amending the patents to overcome that prior art, Honeywell added more than just the inlet guide vane use, and there is nothing in the prosecution history to indicate that Honeywell or the Examiner believed that it was the use of inlet guide vanes -- as opposed to the other features of the invention that were added by the amendments -- that was the reason for allowance. Thus, the reason for the narrowing amendments had no relation to the particular equivalent at issue -- namely, the APS 3200 surge control system’s *particular* use of inlet guide vanes as a response to the 3200’s *particular* DELPQP flow-related parameter.

Realizing the strength of Honeywell's tangential relation argument, Sundstrand buries its response in the back half of its brief and resorts to misstatements of the prosecution history and Honeywell's position. Most egregious among Sundstrand's many misstatements is its canard that "Honeywell added only a single limitation to the asserted claims during prosecution." Sundstrand Br. at 34. This claim -- which lacks any basis in the evidence, but is a cornerstone of Sundstrand's argument -- is objectively and demonstrably false. Incredibly, in making this argument, Sundstrand only mentions one of the three asserted independent claims, Claim 4 of the '194 patent. *Id.* at 34-35, Tab A. Comparisons of the pre- and post-amendment language of the two claims Sundstrand ignores -- Claims 8 and 19 of the '893 patent -- in "redlined" form are attached hereto as Tabs B and C.<sup>1</sup> It is no wonder that Sundstrand chose to ignore these claims, as they leave no room for debate that Honeywell through its amendments added more than just the use of inlet guide vane position. In amending application claim 16 (which became issued Claim 8 of the '893 patent), for example, Honeywell added *four* limitations in addition to "inlet guide vanes": 1) a flow-related parameter whose value is "substantially independent of the temperature of the compressed air;" 2) a comparator means having an "adjustable control set point representing said desired value of said parameter;" and 3) a "reset signal for varying said set point as a function of the position of said inlet guide vanes" 4) "in accordance with a predetermined reset schedule." Tab B; Ex. 7 at HSB401466-67. These additional features are separate and distinct features of the claimed invention. Similarly, in amending original application claim 32 (which became '893 Claim 19), Honeywell also added *four* new limitations. Tab C; Ex. 7 at HSB401472; Honeywell Br. at 8. Sundstrand's Alice-in-

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<sup>1</sup> As both parties agree, under the Federal Circuit decision in this case, the narrowing amendments at issue consisted of the addition of the extra limitations found in the originally dependent application claims to the language of the rejected original independent claims. Honeywell Br. at 7-8; Sundstrand Br. at 5.



Wonderland assertion that Honeywell added only inlet guide vane position use during the relevant amendments simply ignores reality and underlines the weakness of its position.<sup>2</sup>

Nor does Sundstrand find support for its argument in the Federal Circuit's decision in this case. The Federal Circuit neither "treated the IGV limitation as a single limitation" nor held it was "the only relevant amendment to the asserted claims" as Sundstrand pretends. Sundstrand Br. at 1, 35. As to the first issue, the Federal Circuit explained that it was using the phrase "inlet guide vane position" as shorthand to refer "to both the claimed structure of the inlet guide vanes and their claimed function in the surge control system." *Honeywell*, 370 F.3d at 1137, n.2. The Federal Circuit was not purporting they create a new, hybrid claim limitation that combined the language of the three disputed claims -- it is, of course, the actual claim language that governs for *Festo* purposes. Rather, the Federal Circuit made use of an obvious shorthand way to refer to the use of inlet guide vanes as set forth in the actual claim language. This drafting convenience has no conceivable substantive import in this remand proceeding. Secondly, while the Federal Circuit did find that Honeywell "effectively add[ed] the inlet guide vane limitation" to the claims, 370 F.3d at 1144, it never held that inlet guide vane use was the *only* limitation added to the claims, and as recited above and illustrated in Tabs A, B and C hereto, it clearly was not.

Starting from these false premises, Sundstrand directs its tangential relation argument to a straw man. For example, contrary to Sundstrand's assertion, Honeywell never argues that it has met the tangential relation test "merely because none of the prior art references that the examiner cited related to IGV position." Sundstrand Br. at 25. To be sure, this fact is

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<sup>2</sup> In addition, contrary to Sundstrand's argument, more than just inlet guide vane position was added to '194 Claim 4. An accurate depiction of the language added to Claim 4 of the '194 patent is attached as Tab A. That Tab makes it clear that, contrary to Sundstrand's assertion, Honeywell added more than just "a single limitation" to that claim as well. Tab A; Ex. 6 at HSB401573.

highly significant support for rebutting the presumption for tangentiality because it indicates that inlet guide vane position was not the subject at issue in the examination. It is undisputed that none of the prior art that occasioned the amendments (i) featured Sundstrand's "unique" DELPQP flow parameter, (ii) made use of inlet guide vane position as part of the surge control system, or (iii) bears any relation to the infringing Sundstrand system. Ex. 12 at Response No. 5. This confirms the Court's prior fact finding that "Honeywell did not give up an embodiment of the invention with the inlet guide vane" and that "Honeywell did not surrender the elements at issue during prosecution." *Honeywell Int'l*, 2001 WL 66348, at \*6 (D. Del. Jan. 8, 2001) (Ex. 1). This fact finding was not disturbed by the Federal Circuit's solely legal ruling as to the proper application of *Festo* to the facts. Thus, this Court's factual determination stands.

But Honeywell's proof under this prong is far more broad-based. For example, despite Sundstrand's claim that "Honeywell's premise that IGV position 'was never mentioned at any point in the prosecution history' is simply not true," (Sundstrand Br. at 24) Sundstrand fails to identify a single place in the prosecution history where inlet guide vane position was mentioned, either by Honeywell or by the Examiner. This is because, in fact, none exists. It is irrefutable that in submitting its amendments, Honeywell made absolutely no reference to the Sundstrand equivalent, DELPQP, or inlet guide vane position. Moreover, the Examiner never suggested that the amended claims were allowable because they claimed a particular use of inlet guide vane position or even because they mentioned inlet guide vane position at all. Indeed, as shown above and in Tabs A, B and C, no claim was amended merely to add inlet guide vane position use. Moreover, other claims were allowed that did not make any reference at all to inlet guide vanes. *See* Ex. 7 at HSB401458. All evidence demonstrates that the reason for the amendments bore no more than a tangential relation to the equivalent.

Sundstrand next contends that because Honeywell "used [the IGV limitation] to secure a verdict of infringement under the doctrine of equivalents ... the reason for Honeywell's

narrowing amendments (adding the IGV limitation to overcome prior art) is directly related -- and not ‘merely tangential’ -- to the asserted equivalent (the APS 3200’s use of IGV position).” Sundstrand’s Br. at 24. But this argument improperly confuses the *text* of the amendment with the *reason* for making the amendment, which is the issue under *Festo*. The fallacy of this precise argument was identified by Chief Judge Robinson in *Cordis Corp. v. Medtronic Ave., Inc.*, 336 F. Supp. 2d 363, 368 (D. Del. 2004). In *Cordis*, the defendants argued that “‘a narrowing amendment will not be considered to be tangentially related if the disputed limitation was ‘directly at issue’ during prosecution’” and if “‘these same limitations are ‘at issue’ in this litigation.” *Id.* In rejecting this argument as a matter of law, Chief Judge Robinson explained:

By focusing on ‘whether the amendment itself narrows the scope of the claim in a way that affects the equivalent[s] in question,’ defendants are making superfluous the tangential exception to the presumptive bar imposed under *Festo*. As the court observed in *Amgen, Inc. v. Hoeschst Marion Roussel, Inc.*, 287 F. Supp.2d 126, 150 (D.Mass. 2003): ‘If this were the test, it would be an impossible one -- the only reason why the dispute arises is because the equivalent is related to the amendment and thereby affected.’

Instead, Chief Judge Robinson explained, “[t]he correct inquiry is whether the *rationale underlying the amendment*, the ‘reason the amendment was submitted’ -- not the amendment itself -- is more than peripherally related to the equivalent in question.” 336 F. Supp.2d at 369-70 (*citing Amgen*, 287 F. Supp.2d at 150) (emphasis added). *See also Festo*, 344 F.3d at 1369. Thus, Sundstrand’s argument is exactly what Judges Robinson and Young rejected as improper.

As a final attempt to defeat Honeywell’s rebuttal under the tangential relation prong, Sundstrand claims that “[u]nexplained amendments cannot serve as a basis for overcoming the *Festo* presumption.” Sundstrand Br. at 27-28. But here the reason for the amendments is not “unexplained.” Rather, the reason is readily “discernible from the prosecution history record,” just as described in *Festo*. 344 F.3d at 1369.

The *Festo* and *Biagro* cases relied upon by Sundstrand are entirely consistent with the case law put forth by Honeywell in its Trial Brief and both support Honeywell's argument. In both cases, the Federal Circuit examined the prosecution history and the "context in which the amendment was made" in order to determine the "objectively apparent reason" for the amendment. *Festo*, 344 F.3d at 1369-70. *Festo* involved a "voluntary" amendment that was "neither required by a patent examiner nor made in response to a rejection by an examiner for a stated reason." *Id.* at 1364. Because no reason for the narrowing amendment was "objectively apparent" or "discernible from the prosecution history record," the court held that the patentee could not establish that the reason for the amendment was no more than tangentially related to the equivalent. *Id.* at 1371-72. In *Biagro*, the claim at issue was amended in light of prior art to add a phosphorous concentration range of "about 30 to about 40 weight percent." *Biagro Western Sales, Inc. v. Grow More, Inc.*, 423 F.3d 1296, 1306 (Fed. Cir. 2005). The court held that "it is clear from the prosecution history that the reason for adding the range limitation was to overcome a prior art fertilizer that was not concentrated." *Id.* Because this was directly related to the equivalent, the *Festo* presumption was not rebutted. *Id.*

By contrast, in this case, the "objectively apparent" reason for the Honeywell amendments is crystal clear from the prosecution history. The Examiner had rejected certain application claims -- all of which claimed a surge control system with P and  $\Delta P$  sensors subjected to proportional and integral control, which the Examiner held was disclosed by the prior art -- and at the same time had indicated that other claims, each of which added additional elements to the claimed system (which were not disclosed by the prior art), would be allowable if rewritten in independent form. Ex. 6 at HSB401567; Ex. 7 at HSB401458. In accordance with the Office Action, Honeywell did just what was suggested by the Examiner -- it rewrote the objected-to claims in independent form, thereby adding the various additional claim limitations those claims contained. As a result, the rewritten claims were allowed. Ex. 6 at HSB401570;

Ex. 7 at HSB401461. The plain purpose was to include various additional elements in the claims in accordance with the Examiner's dictate in order to overcome the cited prior art and obtain allowance. *See Festo*, 344 F.3d at 1370 ("Moreover, whether an amendment was merely tangential to an alleged equivalent necessarily requires focus on the context in which the amendment was made"); *Biagro*, 423 F.3d at 1306 (considering prior art that amendment was made to avoid as evidence of the underlying purpose for the amendment); *Engineered Prod. Co. v. Donaldson Co., Inc.*, 313 F. Supp.2d 951, 973-74 (N.D. Iowa 2004) (same). Honeywell's reason for making the amendments is "objectively apparent" and "discernible from the prosecution history record" and was entirely unrelated to Sundstrand's equivalent 3200 surge control system and its particular use of inlet guide vane position.<sup>3</sup>

The Federal Circuit's decision in *Insituform*<sup>4</sup> is closely analogous to the case at bar and readily demonstrates why Sundstrand's "unexplained amendment" argument fails. In *Insituform*, the added limitation at issue was the number of cups in the patented process. *Insituform Techs., Inc. v CAT Contracting, Inc.*, 385 F.3d, 1360, 1370 (Fed. Cir. 2004). The Federal Circuit held that the patentee had successfully rebutted the *Festo* presumption under the

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<sup>3</sup> Sundstrand's reliance on *Windbrella Prod. Corp. v. Taylor Made Golf Co., Inc.*, 2006 WL 266037 (S.D.N.Y. Feb. 3, 2006) is misplaced. The court in *Windbrella* rejected the argument that the reason for the amendment was tangential merely because the equivalent was not found in the prior art, finding that "Windbrella does not proffer any evidence of a rationale for this amendment that would make it tangential to a dispute about the scope of the [disputed] limitation." *Id.* at \*8. By contrast, the prosecution history of the patents-in-suit here makes clear that the reason for the amendments was entirely unrelated to the infringing equivalent.

<sup>4</sup> Sundstrand's argument that *Insituform* is the only Federal Circuit case finding the *Festo* presumption rebutted merely reflects the still-brand new nature of this inquiry, created by the 2002 Supreme Court case and the 2003 remand decision by the Federal Circuit. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002); 344 F.3d 1359 (Fed. Cir. 2003) (*en banc*). In fact, the Federal Circuit has only decided a handful of cases on this topic in any direction. Meanwhile, numerous District Court cases have found the *Festo* presumption rebutted, and the Federal Circuit has never reversed a District Court decision finding such rebuttal.

tangential relation prong based on the fact that the reason for the amendment was related to location of the compressor, not the number of cups. *Id.* Although the patentee in *Insituform* did not articulate any reason for adding the cup limitation, the court found that “[t]here is no indication in the prosecution history of any relationship between the narrowing amendment and a multiple cup process, which is the alleged equivalent in this case.” *Id.* Similarly, here, the ***reason for the amendment*** is plain from the face of the prosecution history -- to overcome prior art disclosing P and  $\Delta P$  sensors and proportional and integral control. Ex. 6 at HSB401566-567; Ex. 7 at HSB401456-457. Just as in *Insituform*, “there is no indication in the prosecution history of any relationship between the narrowing amendment” and the Sundstrand equivalent or even the inlet guide vane position at all. *See* 385 F.3d at 1370. Thus, Honeywell need not -- as Sundstrand wrongly states -- “point[ ] to any reason for adding the IGV limitation other than to overcome prior art.” Sundstrand Br. at 33. The Federal Circuit established in *Festo* and later in *Insituform* that the proper focus is on whether the reason for the amendment was unrelated to the ***equivalent***, not unrelated to the prior art. The fact that, as Sundstrand tacitly concedes, the reason for the amendment was to overcome prior art, which was itself completely unrelated to that equivalent, proves Honeywell’s point. No relation exists -- tangential or otherwise -- between the reason for the amendment and the Sundstrand equivalent. Accordingly, Honeywell has successfully rebutted the presumption.

### **III. The Sundstrand Equivalent Was Unforeseeable At The Time Of The Amendments**

Honeywell will also establish that the Sundstrand equivalent was unforeseeable to one of ordinary skill in 1982-83. *Festo*, 535 U.S. at 740. It is undisputed that Sundstrand did not even begin developing its infringing surge control system for the APS 3200 until 1989 and that the particular design of the system -- including the distinctive use of inlet guide vanes --was not finalized until 1995, after years of testing and experimentation. Ex. 15, ¶ 14.

Crucially, Sundstrand never identifies any surge control system in existence anywhere prior to the Honeywell amendments in 1982-83 that, as Sundstrand's equivalent APS 3200 does, measured inlet guide vane position in order to compensate for a flow-related parameter that could indicate multiple levels of flow for a given value of the parameter. Instead, Sundstrand tries to suggest that the existence of inlet guide vanes and inverted V curves prior to the amendment dates somehow equals the equivalent at issue. It does not. The prior existence of some of the pieces, but not the whole, prior to the crucial date serves only to prove Honeywell's point that the specific combination that was later accused of and found by the jury to be an infringement never existed until years after the amendments.

Unable to contest this proof of unforeseeability, Sundstrand's new counsel base Sundstrand's response on a complete disavowal of the positions that the party took in front of the jury at the 2001 trial. A comparison of Sundstrand's position now and in front of the jury reveals stark and pervasive contradictions. For example, Sundstrand now unabashedly contradicts the testimony of its own trial expert, Francis Shinskey, regarding the "unique" nature of the 3200 surge control variable, DELPQP:

<u>Sundstrand in 2006 Remand</u>	<u>Sundstrand at 2001 Trial</u>
<i>"Honeywell's broad assertion that the 'flow-related parameter used in the APS 3200, which Sundstrand termed DELPQP, was novel and had never been used before' is simply not true."</i> (Sundstrand Br. at 14, emphases added.)	<p>"In fact, <i>the surge variable</i>, the variable which is used to control surge in the APS 3200, I discovered that <i>I had never seen that used to control surge before in any work that I had ever done or in any publications that I have ever read.</i>" (Shinskey) (Ex. 3 at 1335.)</p> <p>"Again, the [high flow/low flow test's] only purpose is to protect against this possibility and it's caused based on the <i>unique characteristic</i> of the <i>DELPQP measurement</i> as a function of flow. (Shinskey) (Ex. 3 at 1383.)</p>

Amazingly, rather than try to explain this blatant conflict, Sundstrand now takes the position that Shinskey -- whom it had presented to the jury as a member of the "Control Hall of Fame" (Ex. 3

at 1326) and “the real McCoy” with “decades of experience and knowledge” (Ex. 3 at 2609) -- simply had no idea what he was talking about during his sworn testimony. Sundstrand now claims that “Mr. Shinskey’s statements were based solely on ‘the author’s experience’” rather than as a “person of ordinary skill in the art.” Sundstrand Br. at 17. Sundstrand’s breathtaking attempt to discredit its own witness, on whom it based its entire liability defense at the 2001 trial, not only defies all credibility but is simply untrue:

<u>Sundstrand in 2006 Remand</u>	<u>Sundstrand at 2001 Trial</u>
“ <i>Mr. Shinskey had not conducted a search of prior art</i> for a flow parameter like the APS 3200 used.” (Sundstrand Br. at 17, emphasis added.)	“A. <i>My conclusion was that there were many references of prior art</i> that included all of the elements that were claimed in the Honeywell patent, and these -- this prior art were publications that predated the filing of the application for the Honeywell patents.” (Ex. 26 at 1425-26 (Shinskey).)

Indeed, Sundstrand’s current position regarding foreseeability requires the disavowal not just of Shinskey’s testimony, but of the entire thrust of the case it presented to the jury in 2001. Thus, the so-called “double solution” is completely recast from an unexpected obstacle to old news:

<u>Sundstrand in 2006 Remand</u>	<u>Sundstrand at 2001 Trial</u>
“The Inverted-V/Double Solution Curve Was Well-Known As Of 1982.” (Sundstrand Br. at 17 <i>et seq.</i> )	<p>“Q. At the point <i>in 1990</i> that you first started working on developing the surge control logic, <i>had Hamilton Sundstrand become aware there was a double-solution issue</i> with respect the particular measurement of air in the compressor?</p> <p>A. At the point that I started?</p> <p>Q. Yes.</p> <p>A. <i>No.</i> (Ex. 26 at 1718 (Gruebel).)</p>

It could not be clearer that while Sundstrand tried to convince the jury that its APS 3200 surge control system was unique and novel, its current foreseeability position depends on convincing the Court that the system was simply recycled technology that had been used for decades. Ironically, it is Sundstrand itself who points out that “[u]nder the doctrine of judicial estoppel, a



party may not maintain a position in a legal proceeding that is inconsistent with a position taken by that party in a previous proceeding.” Sundstrand Br. at 10 (citing *Tracinda Corp. v. DaimlerChrysler AG (In re DaimlerChrysler AG Sec. Litig.)*, 294 F. Supp. 2d 616, 628 (D. Del. 2003)). Thus, under Sundstrand’s own authority, it is fully estopped from disavowing its trial position, and Sundstrand’s current stance on foreseeability lacks all credibility.

Next, Sundstrand asserts that “the double-solution problem is not unique to the APS 3200,” and it attaches various graphs that purport to show inverted-V flow curves. Sundstrand Br. at 18-20. Sundstrand’s argument, however, is another red herring. The double solution is not the equivalent, and Honeywell never asserted that the double solution is unique to the APS 3200. What is unique -- and what Sundstrand nowhere disputes is unique -- is the APS 3200 surge control system’s particular *response* to the double solution. Neither that response, nor the APS 3200’s particular use of inlet guide vane position in combination with the unique flow-related parameter DELPQP, is found in any prior art.

Sundstrand’s other arguments simply recycle prior art that the jury already determined is patentably distinct from the Honeywell inventions, and *a fortiori*, from the Sundstrand equivalent. For example, to support its argument that the Sundstrand equivalent was foreseeable because supposedly “the use of flow-related parameters influenced by IGV position in a surge control system has been known in the art since at least the 1970’s,” Sundstrand cites three prior art references: the Glennon patent, the Warnock 1976 article, and the White 1972 article. Sundstrand Br. at 13. But each of these three references was previously featured by Mr. Shinskey in his trial testimony on invalidity (Ex. 26 at 1498-1501, 1448-60 and 1461-69), and the jury determined that each did not anticipate or render obvious the Honeywell patents. It necessarily follows that none could have rendered foreseeable the Sundstrand equivalent.

Sundstrand also relies on two APU surge control systems to argue that the infringing 3200 system was foreseeable -- the Hamilton Standard APU used on the L1011 and

the Honeywell 331-350. Neither supports Sundstrand's argument. The 331-350 APU was designed *after* the relevant amendment dates, so this after-developed technology can hardly show what was foreseeable at the time of the amendments. And the APU for the L1011 utilized a totally different surge control method than the APS 3200 that, in any event, proved unworkable.

The surge control system in the L1011 APU bears little resemblance to the equivalent APS 3200 surge control system. As described by Sundstrand in its trial brief, the L1011 APU utilized a "'shock switch' that detects when extremely high flow levels that would cause the double solution have been reached and, at that point, 'overrides the surge control driving the surge valve toward fully closed' when supersonic flow (and thus shock) is sensed." Sundstrand Br. at 19. The L1011 APU, therefore, never experienced the double solution problem because it overrode and shut down the surge system before the double solution could occur. Moreover, the L1011 system did not measure inlet guide vane position or use that position as an input in dealing with the double-solution issue. The APS 3200 surge control system works entirely differently. Rather than avoiding the double solution, the APS 3200 surge control system uses inlet guide vane position to determine which side of the double solution flow curve the system is operating on. Ex. 3 at 1579-80. Thus, the L1011 APU did not utilize "the same approach the APS 3200 used" as Sundstrand disingenuously argues (Sundstrand Br. at 19), but used completely different technology not at issue in this case.<sup>5</sup>

And even if an "approach" were sufficient to show foreseeability -- which it is not -- if the L1011 APU had really used the same approach as the APS 3200 surge control system found to infringe, then surely Sundstrand would have presented it as invalidating prior art during

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<sup>5</sup> Furthermore, Hamilton Standard abandoned the "shock switch" configuration in the L1011 and replaced it with a conventional flow sensor around 1980. Ex. 27 at SUND 006049. This action in abandoning what Sundstrand claims was a similar system makes it clearer still that the APS 3200 surge control system would not have been foreseeable in 1982-83.

the February 2001 trial. Sundstrand's claim that "the L1011 was not important in the 2001 trial" cannot be reconciled with its claim that the L1011 APU's surge control system is "the same approach the APS 3200 used." Sundstrand Br. at 19.

As for the surge control system for Honeywell's 331-350, it is undisputed that it was designed years *after* the relevant amendment dates. *See* Ex. 28 at Resp. No. 7. A November 1987 Surge Control Study for the 331-350 APU, for example, shows that Honeywell was still considering at least four different surge control design options at the end of 1987.<sup>6</sup> Ex. 29 at AS 103074. Sundstrand's attempt to rely on the later-developed 331-350 to show that something was not unforeseeable years earlier is pure speculation. The "criterion presents an objective inquiry, asking whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art *at the time of the amendment.*" *Festo*, 344 F.3d at 1369 (emphasis added). For the same reasons, Sundstrand's reliance on the testimony of Mr. Clark is also pure speculation. Sundstrand Br. at 21. The indisputable fact remains that neither Honeywell, nor Sundstrand, nor anyone else in the industry created or foresaw the APS 3200 surge control system with its particular, "unique" DELPQP flow-related parameter and its particular use of inlet guide vane position anytime prior to the amendment dates.

And despite Sundstrand's protests to the contrary, when faced with the double solution itself in the early 1990s, Sundstrand in fact took nearly four years to develop a workable response in the form of the equivalent 3200 surge control system, an extended development period confirms the unforeseeable nature of that equivalent. What Sundstrand suggests (Sundstrand Br. at 22) was control logic originally proposed to deal with the double solution in the APS 3200 was called the "B-factor" test. *See* Ex. 17, 18. However, Sundstrand soon

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<sup>6</sup> The final design for the 331-350 surge control system, adopted years after the patent amendments, differed significantly from the equivalent APS 3200. For example, the 331-350 did not incorporate the DELPQP flow-related parameter and instead measured total pressure, while the APS 3200 measured only static pressure. Ex. 31 at 135.

determined that “the B factor, as it has presently been defined is not acceptable for surge control.” Ex. 18 at HSB035443 (emphasis in original). While “the critical B-factor (Bc), which is designed to differentiate between low and high load compressor flow” did operate as a “function of IGV position,” it was precisely this function that proved “unreliable.” *Id.* at HSB035445-446 (“The control problem arises when the B-Factor incorrectly calculates a low condition when a high flow condition is present”). Sundstrand continued to struggle with the problems created by the B-factor logic over the next year and a half, until it finally replaced the B-factor test altogether with an entirely different approach to solving the double solution in December 1994. *See* Ex. 30 at HSA 226756 (“B-factor replaced with Load Compressor Ratio (P7/P2)c to eliminate Load Compressor Discharge Temperature Dynamic Effects and miscalculation of the B-factor.”). Thus, Sundstrand’s claim that it “decided to use IGV position to solve the double-solution issue within two months of the issue being identified, and it never strayed from using IGV position in that way” (Sundstrand Br. at 22) is a misrepresentation belied by Sundstrand’s own documents. It was not until 1995, four years after it first identified the problem, that Sundstrand finally came up with the solution in the form of its infringing equivalent. *See* Honeywell Br. at 9-10.

At the end of the day, Sundstrand’s response to Honeywell’s unforeseeability argument amounts to a classic improper attempt to rely on hindsight. Sundstrand picks separate components of the infringing combination and claims they were known in 1982. Then it argues that because some of these separate components existed, the APS 3200 surge control system would have been foreseeable to one of ordinary skill in 1982. But by this “logic” virtually every invention would have been foreseeable (i.e., “obvious”) because its separate elements were known before. In reality it is the **combination** of elements used by the APS 3200 that was found to infringe, and noticeably absent from Sundstrand’s brief is any assertion that the **combination** of elements found to infringe existed in 1982-83, or that the technology, knowledge or need existed

as of that time to put the separate components together in the infringing design. The Supreme Court has explained that the overall focus in determining whether a patent-holder has rebutted the *Festo* presumption is whether the narrowing amendment “surrender[ed] the *particular equivalent* in question.” *Festo*, 535 U.S. at 740 (emphasis added). The particular equivalent in this case is the unique combination of elements utilized in the 3200 surge control system. The lack of any example or teaching in the prior art of this Sundstrand equivalent is key, because the question is whether “at the time of the amendment one skilled in the art could [ ] reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent.” *Id.* at 741. Because the Sundstrand equivalent was unforeseeable at the time of the amendment, it would not be reasonable to have expected Honeywell to have drafted a claim that literally encompassed it, and Honeywell can successfully rebut the *Festo* presumption under this prong.

#### **IV. There Are Compelling “Other Reasons” Why Honeywell Could Not Reasonably Have Been Expected To Have Described The Equivalent Literally**

Finally, Honeywell identified in its opening Trial Brief two “other reasons” for rebutting the *Festo* presumption. First, a patentee, patent prosecutor or person of ordinary skill in the art in 1982-83 would have reasonably believed that he had not surrendered coverage of equivalents to the inlet guide vane limitation during prosecution and therefore would not have seen the need to seek additional claim coverage for the equivalent. Honeywell Br. at 28-29. Such a finding does not question that *Festo* is applied retroactively, despite Sundstrand’s protestations. Even applied retroactively, the whole point of the Supreme Court’s *Festo* inquiry is that prosecution history estoppel will not apply in individual cases where the rebuttal criteria are met. Moreover, a proper *Festo* rebuttal analysis under the “other reasons” criterion includes a reasonableness element. *See Festo*, 535 U.S. at 741 (noting that the proper inquiry is whether “the patentee could not reasonably be expected to have described” the equivalent). Indeed, consideration of a patentee’s reasonable belief or expectation during the amendment process is

consistent with the Federal Circuit's guidance on this rebuttal criterion. *Festo*, 344 F.3d at 1376 n.7 (Rader, J. concurring) ("The tangentiality and 'some other reason' grounds for rebutting the complete surrender presumption are also important ways to acknowledge the drafter's expectations when applying an estoppel."); *see also Amgen*, 287 F. Supp.2d at 156 ("Moreover, the Supreme Court also specifically included an analysis of reasonable expectations of the patentee in the third criterion to rebut the presumption."). Honeywell's argument is entirely proper under Federal Circuit and Supreme Court guidance and will establish rebuttal of the presumption for this "other reason."<sup>7</sup>

Honeywell's second "other reason" is that the patentee, patent prosecutor, or person of ordinary skill in the art would have reasonably believed that the amended claims already embraced the accused equivalent within their literal scope. Hon. Br. at 29-31. Sundstrand's contention that this theory is precluded by the Federal Circuit's decision in *Biagro* is wrong. The patentee's "other reason" in *Biagro* was based on an express challenge to the trial court's claim construction. *Biagro*, 423 F.3d at 1302. *Biagro* tried to rebut the *Festo* presumption under the "other reasons" prong by showing that it amended the claim under a theory that was contrary to the construction adopted by the District Court. *Id.* at 1307. The Federal Circuit rejected the patentee's attempt to reargue the issue of claim construction under the guise of rebutting the *Festo* presumption. *Id.* Here, in contrast, Honeywell does not contest the Court's claim construction, but will prove that the patentee would have reasonably believed

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<sup>7</sup> While the Federal Circuit identified the "shortcomings of language" in the *Festo* remand opinion as one example of an "other reason," it has never suggested that that was the only such reason, and the category created by the Supreme Court is, on its face, much more encompassing. This is confirmed by the District Court cases that have found rebuttal based on the "other reason" prong. *See, e.g., Amgen*, 287 F.Supp.2d at 158-59 (rebuttal for "other reason" based on theory that patentee would have believed that accused product was literally covered by amended language); *Liquid Dynamics Corp. v. Vaughan Co., Inc.*, 2004 WL 2260626, \*14 (N.D. Ill. Oct. 1, 2004) (Ex. 25) (rebuttal for "other reason" based on theory that it was impossible for inventors to literally describe all equivalents).

that the amended claim *as construed by the Court* already embraced the accused equivalent within the scope of the claim. Contrary to Sundstrand's assertion, the Federal Circuit in *Biagro* did not even address -- much less reject -- the *Amgen* decision finding rebuttal based on the "other reasons" prong on exactly this theory. *See Amgen*, 287 F. Supp.2d at 158-159. Thus, Honeywell's second "other reason" is also proper under Federal Circuit and Supreme Court authority.

### CONCLUSION

For the foregoing reasons, the Court should hold that Honeywell has rebutted the presumption of prosecution history estoppel under each of the three criteria specified by the Supreme Court in *Festo*. The jury's verdict of infringement should be reinstated.

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March 10, 2006

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**CERTIFICATE OF SERVICE**

I hereby certify that on March 10, 2006, I electronically filed the foregoing document with the Clerk of Court using CM/ECF, which will send notification of such filing to Richard D. Kirk.

I also certify that on March 10, 2006, I caused to be served true and correct copies of the foregoing document on the following in the manner indicated below:

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